

Attorney Docket No. 13631-46

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NOV 21 2006AMENDMENT TO THE CLAIMS

Please amend Claims 18 and 47 and add new claims 51 and 52, as follows:

1-12. (Cancelled)

13. (Withdrawn) A method of bonding a first body to a second body comprising the steps of: disposing between the first body and the second body, a freestanding reactive multilayer foil; pressing the bodies together against the foil; and igniting the reactive foil.

14. (Withdrawn) The method of claim 13 wherein at least one of the bodies is a semiconductor or microelectronic device.

15. (Withdrawn) The method of claim 13 wherein the reactive multilayer foil has a thickness in excess of 10µm.

16. (Withdrawn) The method of claim 13 wherein the bodies have coefficients of thermal expansion differing by at least 1 µm/m/°C.

17. (Withdrawn) The method of claim 13 wherein the first body comprises metal and the second body comprises ceramic material.

18. (Currently Amended) A product made by a method of bonding a first body to a second body comprising the steps of:

disposing a freestanding reactive multilayer foil between the first body and the second body,

pressing the bodies together against the freestanding reactive multilayer foil; and

igniting the freestanding reactive multilayer foil,

wherein the product comprises a reacted multilayer foil having a heat of formation more negative than -30kJ/mol-atom.

19-39. (Cancelled)

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40. (Withdrawn) A method of bonding a first body to a second comprising the steps of: disposing between the first body and the second body, a freestanding reactive multilayer foil and at least one layer of meltable joining material; pressing the bodies together against the foil and joining material; and igniting the reactive foil to melt the joining material.

41. (Withdrawn) The method of claim 40 wherein the joining material is coated on the foil.

42. (Withdrawn) The method of claim 40 wherein the joining material is freestanding.

43. (Cancelled)

44. (Previously Presented) The product of claim 18, wherein at least one of the first body and the second body comprises a microelectronic device.

45. (Previously Presented) The product of claim 18, wherein the first body and the second body have coefficients of thermal expansion (CTEs) that differ by more than about $1\mu\text{m}/\text{m}/^\circ\text{C}$.

46. (Previously Presented) The product of claim 18, wherein at least one of the first body and the second body comprises a semiconductor.

47. (Currently Amended) A bonded structure comprising:

a first body; and

a second body bonded to the first body by a joining region, wherein the joining region comprises a reacted freestanding multilayer foil having a heat of formation more negative than -30kJ/mol-atom .

48. (Previously Presented) The structure of claim 47, wherein at least one of the first body and the second body comprises a microelectronic device.

49. (Previously Presented) The structure of claim 47, wherein at least one of the first body and the second body comprises a semiconductor.

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50. (Previously Presented) The structure of claim 47, wherein the first body and the second body have CTEs that differ by more than about $1\mu\text{m}/\text{m}^\circ\text{C}$.

51. (New) The structure of claim 47, wherein the reacted freestanding multilayer foil comprises an array of openings.

52. (New) A bonded structure comprising;

a first body; and

a second body bonded to the first body by a joining region, wherein the joining region comprises a compound having a heat of formation more negative than -30kJ/mol-atom and a joining material.